Math 157 - Quiz 8

Name _____

October 29, 2014

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (3 points) Use the 2nd derivative to determine whether the graph of

$$f(x) = 85x^4 + 107x^3 - 264x^2 + 120x + 1$$

is concave up or concave down at $x = -1$.

2. (4 points) Find the inflection point(s) of the graph of $y = x\,e^{-3x}$.

3. (3 points) Find the critical numbers and determine whether they give local (relative) minima or maxima: $g(x) = 2x^3 - 3x^2 - 36x$.